Bluffsview Elementary School:
Ohio Solar Program Results in Glowing Test Scores

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Energy$mart Schools
A Campaign of Rebuild America
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"What better way to educate our students about alternative energy sources, prepare them to work as adults to conserve dwindling natural resources, and ultimately motivate them to improve the environment in which they live." These are the words of retired Worthington Schools Superintendent, Dr. Damon Asbury, in response to the1998 installation of a solar energy system at Bluffsview Elementary.

Chris Timm from Energy Management Corporation displays silica crystal cells in a solar panel to students at Bluffsview Elementary before it is added to the project.

Collaborating for solar programming

The solar energy system was installed as part of a multi-faceted partnership between the U.S. Department of Energy, Ohio Department of Development Office of Energy Efficiency, American Electric Power (AEP), BP Solar, the Foundation for Environmental Education, and the Ohio Environmental Protection Agency. The 2kW photovoltaic system serves as a virtual laboratory to help the students understand energy use and renewable energy systems. Science teachers incorporated the panel technology into their curriculum, giving students hands-on experience with solar technology, calculating energy output, monitoring electric usage, and generating charts showing the school building's energy supply and demand.

Rising test scores

Karen Groff, Assistant to the Principal, reports the apparent positive impact of the solar program on student achievement. When comparing 1998 Ohio Proficiency Test results to the first records in 1996, Bluffsview fourth graders show a 25 percent increase in math scores and a 5 percent increase in science scores. Sixth graders achieved a 13 percent increase in math scores and an 18 percent increase in science scores. Over the same time period, the state average for Ohio showed no change.

PROFILE:

Location:
Worthington, Ohio

District size:
59,461 square feet

Energy project scope:
Solar panel installation, energy education involving monitoring and use of computer applications

Date completed: 1998

Electricity generated:
2 kW daily

Project funding:
American Electric Power, Ohio Dept. of Development - Office of Energy Efficiency, BP Solar, Ohio Air Quality Authority, Foundation for Environmental Education, Ohio EPA Office of Pollution Prevention, U.S. Dept. of Energy

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The teachers attribute the rise in math and science scores to students' use of data measuring systems that can be accessed on the Internet. Bluffsview Elementary's principal, Donna Kelley, describes this unique learning process. "In the innovative model we have implemented, students must use the data they collect to support the conclusions they make—the emphasis is placed on students articulating their interpretations of the data gathered in a variety of ways."

Bluffsview teacher and students make graphs showing electricity generated by the school's solar project.

Global exposure

Other schools around the world are sharing the same exciting solar technology. A remote school in Bolivia, which had no reliable electric power, installed a photovoltaic system to power their computers and related equipment. A lively exchange is now going on between the Bolivian school, *La Rosa Santa Ignacia quell cucaracha*, and the students at Bluffsview Elementary.

Lessons learned in the solar project are affecting all facets of students' education. Greg Witt, a fifth grade teacher at Bluffsview, sums up the valuable impact on the students, "This solar project will help my class to focus outward, to be aware of community resources, and to understand the application of science and math in everyday life."

See the EnergySmart Schools Web site at:
www.eren.doe.gov/energysmartschools

Or call the Energy Efficiency and Renewable Energy Clearinghouse (EREC) at: 1-800-DOE-3732

The EnergySmart Schools campaign is operated by Rebuild America, through the U.S. Department of Energy's Office of Building Technology, State and Community Programs.

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May 2001
DOE/ESS006